

REMARKS

Claims 1-5 have been examined and have been rejected under 35 U.S.C. § 112, second paragraph, as well as under 35 U.S.C. § 103(a). By this Amendment, Applicant has canceled claims 2 and 4, without prejudice or disclaimer.

I. Rejections under 35 U.S.C. § 112, second paragraph

The Examiner has rejected claims 1-5 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. The Examiner maintains that the phrase “thinning out” does not contain a clear description of any degree of thinning of the pulse sets. However, Applicant submits that it is not necessary, for a proper understanding of the claim, for a specific degree of thinning to be recited therein. On at least pages 13-16 of the specification, non-limiting examples of a degree of thinning are set forth. However, such degrees are not necessary to a proper understanding of the claim. In fact, such amendments would unduly narrow the claim scope. As stated in MPEP § 2173.04, breadth of a claim is not to be equated with indefiniteness. Further, where Applicant has not otherwise indicated that he or she intends the invention to be of a scope different from that defined in the claims, then the claims comply with 35 U.S.C. §112, second paragraph. Accordingly, Applicant submits that further amending the claim to recite additional structure would unduly narrow the scope of the claim.

The Examiner also maintains that the apparatus claims are written in narrative form (pg. 2 of Office Action). However, Applicant submits that the claims are written in proper means-plus-function language, where a means and its accompanying function are provided.

Finally, the Examiner has rejected the use of “so as to” in the claims. Accordingly, Applicant has amended the claims to remove the rejected language.

II. Rejections under 35 U.S.C. § 103(a)

The Examiner has rejected claims 1 and 3 under 35 U.S.C. § 103(a) in view of JP57186378A to Yoshihide. Yoshihide was cited in the December 13, 2004 Information Disclosure Statement. Further, the Examiner has rejected claims 2, 4 and 5 under 35 U.S.C. § 103(a) in view of Yoshihide and U.S. Patent No. 4,128,794 to Burleson.

Claim 1 recites a thinning-out means, into which the command pulse sets are inputted, for switching a number of pulses thinned out from the command pulse sets, according to a pulse width setting of the control parameters. Applicant submits that a non-limiting embodiment of such features is set forth on at least pages 12-15 of the present Application.

In Yoshihide, in order to obtain a pulse train whose power is proportional to the laser output power, the pulse train supplied to the electric power source thereof is densely or rarely controlled using the discharging electric power of each pulse being constant. As represented by Equation 1 of Yoshihide, the number (Y) of pulse trains per unit time is obtained by commanding a ratio (X/X_{\max}) against the maximum value (X_{\max}). Accordingly, only the number of pulse trains is set based on the strength of laser output power.

On the other hand, in the claimed configuration of the thinning-out means, a number of pulse trains are set in response to the laser pulse width. Applicant submits that such feature is not taught or suggested in Yoshihide.

Amendment under 37 C.F.R. § 1.111
U.S. Application No. 10/517,656

At least based on the foregoing, Applicant submits that Yoshihide fails to teach or suggest the claimed thinning-out means, and therefore, respectfully requests the Examiner to reconsider and withdraw the rejection of claim 1.

Further, Applicant submits that claim 3 and newly added claim 6 are patentable at least by virtue of their dependency upon claim 1. Since claim 5 contains features that are analogous to claim 1, and Burleson fails to cure the deficient teachings of Yoshihide, Applicant submits that claim 5 is patentable over the cited references for at least analogous reasons as claim 1.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

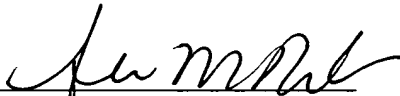
Respectfully submitted,

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER


Allison M. Tulino
Registration No. 48,294

Date: August 3, 2006